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ABSTRACT

Based on data collected from the 1,288 students who enrolled at Kapiolani Community College as first-time freshmen in Fall 1979, a study was undertaken to determine the characteristics of new students that are predictive of two dependent variables: (1) second semester enrollment, and (2) a first semester grade point average (GPA) of 2.0 or above. A stepwise regression analysis was applied to assess the predictive value of the following independent variables: full- or part-time enrollment status, educational objectives, scores on English and math placement tests, sex, age, marital status, high school GPA, employment status, basic skills competency, educational goals, college choice, financial worry, defined career plans, and degree of student self-confidence. Study findings, based on two separate regression equations for vocational and liberal arts students, indicate that while academic characteristics seemed more highly correlated with GPA and academic persistence than did personal characteristics, none of the independent variables could account for more than 20% of the variance in either of the dependent variables. Data tables and summary conclusions and recommendations are included in the study report. (JP)

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ED192828

EARLY IDENTIFICATION OF THE POTENTIAL DROPOUT
AN EXPLORATORY STUDY BASED ON
FALL 1979 NEW STUDENTS

Report 6

Student Flow Program

U S DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

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July 1980

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A. Introduction

A student flow project, involving all of Hawaii's seven community colleges, was conducted in 1975-1978 and included the development of multiple regression equations to predict second-semester enrollment and graduation.[1] Those equations were based on five characteristics of new students at entry (full-/part-time status, sex, educational objective, entry age, marital status) and two academic characteristics at the end of the semester (credit-completion ratio and grade point average).

Because of the limited data available for prediction and the fact that data on two academic characteristics were not available at entry, the plan for KCC's Student Flow Program includes an attempt to minimize these shortcomings in the following two ways:

- to supplement present data on student characteristics by: (1) including the scores of new students on the English and Math placement tests and (2) administering an Entering Student Survey which would include items that might be related to progression.

- to explore the development of regression equations to predict the probability of a new student having a first-semester GPA of 2.0 or above (instead of the probability of graduation).

The literature generally indicates that high school grades are "the most consistently potent predictor of college attrition."[2] Since Hawaii's community colleges do not require high school transcripts as part of the application process, we hoped to obtain some proxy measures via the students' responses on the Entering Student Survey. In addition, we hypothesized that scores on the English and Math placement tests were reflective of the academic preparation of students.

Our 1975 study, as expected, showed that predicting the probability of graduation was less successful than that of second-semester enrollment. We therefore decided to eliminate the former area and to substitute a more meaningful dependent variable: first-semester GPA of 2.0 or above. This approach is especially relevant to Kapiolani Community College because our study of the Fall 1979 new students revealed that about a third of the vocational education and liberal arts students were placed on probation at the end of their first semester because their GPAs were below 2.0 (Student Flow Program Report 5).

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[1]Mildred D. Kosaki, assisted by Irene T. O. Nakamura and Hubert Pang, Entry and Exit: Student Progression and Persistence in Hawaii's Community Colleges (Honolulu, Hawaii: University of Hawaii, Office of the Chancellor for Community Colleges, April 1979), pp. 85-90, 149-153.

[2]Alexander W. Astin, Preventing Students from Dropping Out (San Francisco: Jossey-Bass, Inc., 1975), p. 30.

B. Plan for Multiple Regression Analysis

We were interested in developing multiple regression equations based on the Fall 1979 new students because we hoped we would be able to apply the equations to the Fall 1980 new group to identify potential dropouts early in the semester of entry.

We decided on the following:

- to concentrate only on students new to higher education, eliminating transfers, because we knew from previous studies that the latter generally have developed some college survival skills.
- to develop separate equations for liberal arts and vocational education students. This means that vocational education includes majors in business, food services, health services, and legal assisting. This is a diverse group but our concern for a large enough sample size--preferably about 200--necessitated this decision.
- to develop equations for two dependent variables:
  - second-semester (Spring 1980) enrollment (yes = 2; no = 1)
  - first-semester GPA of 2.0 or above (yes = 2; no = 1)
- to have two sets of independent variables:
  - student characteristics in the college's information system:

Characteristic	Scoring
Enrollment Status	full-time = 2; part-time = 1
Educational Objective	associate = 2; certificate = 1
English Placement	Eng 100 or +100 = 5; Eng 22/50 = 4; Eng 21 = 3; Eng 7/10 = 2; ELI 004 = 1
Math Placement	Math 140 = 6; Math 130, 115, & Qm 121 = 5; Math 27, 100 & ICS 112 = 4; Math 25 = 3; Math 24 = 2; Math 01 = 1
Sex	male = 2; female = 1
Entering Age	over 24 = 3; 19-24 = 2; below 19 = 1
Marital Status	married = 2; unmarried = 1

  - responses to selected items in the Entering Student Survey:

Item	Scoring
Average Gr in Hi Sch	A = 4; B = 3; C = 2; D = 1
Present Employment	yes = 2; no = 1

Previous Preparation:	
Reading Skills	very well = 3; adequately = 2; poorly or not at all = 1
Writing Skills	Ditto
Math Skills	Ditto
Study Habits	Ditto
College Goals:	
Prepare for Career	yes = 2; no = 1
Get Degree/Cert.	Ditto
Satisfy Parents' Wishes	Ditto
College Selection:	
College has Courses	Ditto
Close/Conv. Location	Ditto
Financial Worry	no = 2; yes = 1
Career Plans	has plans = 2; no plans = 1
Very Good Chance that Student Will:	
Attend Classes	yes = 2; no = 1
Make B Average	Ditto
Be satisfied with KCC	Ditto
Get Degree from KCC	Ditto

- to have independent variables enter the regression analysis in a stepwise fashion[3] and to use SPSS (Statistical Package for the Social Sciences) in developing the equation.

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[3]The stepwise regression procedure involves "the re-examination at every state of the regression of the variables incorporated into the model in previous stages. A variable which may have been the best single variable to enter at an early stage may, at a later stage, be superfluous because of the relationships between it and other variables now in the regression. To check on this, the partial F criterion for each variable in the regression at any stage of calculation is evaluated and compared with a preselected percentage point of the appropriate F distribution. This provides a judgment on the contribution made by each variable as though it had been the most recent variable entered, irrespective of its actual point of entry into the model. Any variable which provides a nonsignificant contribution is removed from the model. The process is continued until no more variables will be admitted to the equation and no more are rejected." (N. R. Draper and H. Smith, Applied Regression Analysis (New York: John Wiley and Sons, Inc., 1966), p. 171.)

C. The Results

We found the following multiple correlations between the independent and the two dependent variables:

	No. of Cases	Mult. R	R^2
LIBERAL ARTS STUDENTS			
1. Second-Semester Enrollment			
a. Characteristics Only	665	.2378	.0566
b. Chars. & Survey Responses	317	.2725	.0743
2. First-Semester GPA of 2.0 or Above			
a. Characteristics Only	665	.2198	.0483
b. Chars. & Survey Responses	317	.3889	.1513
VOCATIONAL EDUCATION STUDENTS			
1. Second-Semester Enrollment			
a. Characteristics Only	623	.2436	.0593
b. Chars. & Survey Responses	308	.2678	.0717
2. First-Semester GPA of 2.0 or above			
a. Characteristics Only	623	.2178	.0474
b. Chars. & Survey Responses	308	.3690	.1361

R^2 values are provided because they reflect the "overall accuracy of the prediction equation," i.e., "the proportion of variation explained by the variables included in the regression equation."[4]

The following observations are worthy of note:

- Unfortunately, slightly less than half of the new students responded to all items in the Entering Student Survey.
- The total group of new students had slightly lower R^2 values for second-semester enrollment, based on student characteristics, for both liberal arts and vocational education students, contrasted to the R^2 values for the sub-group that also responded to all items in the Entering Student Survey.
- The same is true for predicting first-semester GPA of 2.0 or above; the R^2 values rise by about 10 percent for the group that had data on survey responses among both liberal arts and vocational education students.
- Differences in multiple correlations are greater, depending on the nature of independent variables, than on the two major groupings of students.

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[4] Norman H. Nie, et al, SPSS: Statistical Package for the Social Sciences, Second edition (New York: McGraw-Hill Book Co., 1975), p. 331.

Summary tables on the results of the regression analysis are found in Appendices A (liberal arts) and B (vocational education) for both sets of independent variables and for both dependent variables.

These tables show that the simple r (correlation) values for the independent and dependent values were low, generally below .20. However, among the independent variables, three usually had r values which headed the list: enrollment status (full-/part-time), math placement level and average high school grades.

D. Conclusion and Recommendations

Since the R^2 values for predicting both second-semester enrollment and first-semester GPA of 2.0 or above, for both liberal arts and vocational education students, are low (below 10 percent of the variance for the first dependent variable and below 20 percent for the second), we are recommending that the equations not be applied to the Fall 1980 new students. Our multiple regression analysis adds another footnote in the literature on the difficulties of predicting human behavior, based on rather limited data. We have learned that the data we have are not enough to predict, with sufficient accuracy, whether new students in the liberal arts and in vocational education will return for a second semester or have a passing GPA at the end of their first semester.

In attempting to explore the reasons for this, several possible explanations come to mind. How "homogeneous" are liberal arts students? We know that some with high academic aptitudes tend to transfer to a four-year campus after one semester. We also know that liberal arts majors include a wide variety of students, from the highly motivated with professional degree aspirations to the student who really isn't sure about his educational objectives. While vocational education students generally have specific educational objectives, they include health services and legal assisting majors who are required to meet certain academic and aptitude criteria as well as majors in food services and business programs with relatively open-door admissions policies. Although these differences were recognized, we needed to have a large enough sample size for prediction, so we grouped these majors together.

Since we found that "academic" characteristics seem more highly correlated with GPA and progression than other characteristics, we will develop expectancy tables for various programs, based on the following: math placement levels, English placement levels, full-/part-time status and estimated high school GPA.

We make one last recommendation: Similar multiple regression analyses should be conducted on the Fall 1980 new students and if the results are no different, the approach should be abandoned. In addition, multiple regression analyses should be undertaken for each of the following program groupings: liberal arts, secretarial science, accounting, data processing, merchandising, food services, hotel operations, health services, and legal assisting, if the sample size is close to 200 or more. In order to increase sample size, data for Fall 1979 and Fall 1980 new students should be combined. This approach, based on greater homogeneity of students in the vocational programs may be more productive, but the diversity of students in the liberal arts program remains a

challenge. Perhaps item 6 in the Entering Student Survey, which deals with the "highest degree" students plan to obtain, might be used to subdivide the liberal arts group into two: those with bachelors' or higher degrees in mind and those with lower degree aspirations. This should be considered in planning regression analysis for the Fall 1980 entering group.

Our study shows that the identification of the potential dropout is a difficult task and that present information on the student alone is not adequate. This must be supplemented with data on the interaction between the student and the institution. Tinto's recent theoretical synthesis of research on dropouts is useful. He "argues that the process of dropout from college can be viewed as a longitudinal process of interactions between the individual and the academic and social systems of the college during which a person's experiences in those systems . . . continually modify his goal and institutional commitments in ways which lead to persistence and/or to varying forms of dropout."[5] This reminds us of the crucial importance of the impact of the institution upon students, a view expressed well by Lee Noel: "College student retention is a campus-wide responsibility. It starts with an attitude that suggests that the institution exists to serve students. This attitude should permeate the entire campus . . . Everyone on the campus--faculty, administrators and support staff--has an important contribution to make as a potent retention agent."[6]

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[5]Vincent Tinto, "Dropout from Higher Education: A Theoretical Synthesis of Recent Research," Review of Educational Research, Vol. 45, No. 1 (Winter 1975), p. 90.

[6]Lee Noel, editor, Reducing the Dropout Rate (San Francisco: Jossey-Bass, Inc., 1978), p. ix.

APPENDIX A

LIBERAL ARTS: SUMMARY TABLES ON REGRESSION ANALYSIS

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TABLE A-1

Liberal Arts: Second Semester Enrollment
Characteristics Only

SUMMARY TABLE

VARIABLE		MULTIPLE R	R SQUARE	RSQ CHANGE	SIMPLE R	B	BETA
ENRLST	ENROLLMENT STATUS	0.16139	0.02605	0.02605	0.16139	0.1115704	0.12787
MATH	MATH PLACEMENT	0.19877	0.03951	0.01346	0.14251	0.28606490-01	0.10316
ENTAGE	AGE GROUPINGS---ENTERING AGE	0.22168	0.04914	0.00963	-0.14408	-0.63376900-01	-0.09744
SEX		0.23775	0.05651	0.00739	-0.07706	-0.76340460-01	-0.08594
ENG	ENGLISH PLACEMENT	0.23782	0.05656	0.00005	0.08736	0.16133360-02	0.00640
(CONSTANT)						1.703562	

TABLE A-2

Liberal Arts: Second Semester Enrollment
Characteristics and Survey Responses

SUMMARY TABLE

VARIABLE		MULTIPLE R	R SQUARE	RSQ CHANGE	SIMPLE R	B	BETA
ITEM10	AVERAGE GRADE IN HIGH-SCHOOL	0.13171	0.01735	0.01735	0.13171	0.64302790-01	0.10069
ITEM9N4	GET DEGREE FROM KCC	0.17531	0.03073	0.01339	0.12007	0.1104176	0.13124
ENRLST	ENROLLMENT STATUS	0.19129	0.03659	0.00586	0.06824	0.59901860-01	0.07536
ITEM1N1	GET DEGREE-CERTIFICATE	0.20379	0.04153	0.00494	-0.01863	-0.72846300-01	-0.09021
ITEM9N1	ATTEND CLASSES	0.21778	0.04743	0.00590	0.10177	0.96324260-01	0.08696
ITEM3	FINANCIAL WORRY	0.22581	0.05099	0.00356	-0.06834	-0.39994080-01	-0.04695
ITEM11N2	READING SKILLS	0.23319	0.05438	0.00339	0.05094	0.1134978	0.15152
ITEM11N3	WRITING SKILLS	0.23798	0.05664	0.00211	-0.04578	-0.93681670-01	-0.12277
ENTAGE	AGE GROUPINGS---ENTERING AGE	0.23760	0.06636	0.00206	-0.05745	-0.22319310-01	-0.03342
SEX		0.26120	0.06822	0.00187	-0.08925	-0.44717470-01	-0.05485
ITEM7	PRESENT EMPLOYMENT	0.26498	0.07022	0.00199	0.03832	0.42099770-01	0.05204
ITEM5	CAREER PLANS	0.26685	0.07121	0.00099	-0.01112	-0.26204580-01	-0.03223
ENG	ENGLISH PLACEMENT	0.26821	0.07194	0.00073	0.00229	-0.11990390-01	-0.04534
MATH	MATH PLACEMENT	0.26989	0.07284	0.00090	0.05985	0.10851830-01	0.04160
MARST	MARITAL STATUS	0.27091	0.07339	0.00055	-0.05257	-0.58161820-01	-0.02857
ITEM9N3	SATISFIED WITH KCC	0.27178	0.07386	0.00047	0.02396	-0.19241510-01	-0.02459
ITEM11N8	STUDY HABITS	0.27205	0.07401	0.00015	0.04027	0.10188520-01	0.01345
ITEM9N2	MAKE B AVERAGE	0.27226	0.07413	0.00012	0.07126	0.10593150-01	0.01310
ITEM2N5	CLOSE & CONVENIENT	0.27236	0.07418	0.00005	0.03995	-0.59280350-02	-0.00733
ITEM11N1	MATH SKILLS	0.27253	0.07422	0.00004	0.04637	-0.61359090-02	-0.00848
ITEM1N10	SATISFY PARENT'S WISHES	0.27250	0.07426	0.00004	0.00575	-0.67910170-02	-0.00837
(CONSTANT)						1.519845	

TABLE A-3

Liberal Arts: First-Semester GPA of 2.0 or Above
Characteristics Only

SUMMARY TABLE

VARIABLE		MULTIPLE R	R SQUARE	RSQ CHANGE	SIMPLE R	B	BETA
MATH	MATH PLACEMENT	0.14499	0.02102	0.02102	0.14499	0.41252790-01	0.13137
SEX		0.19008	0.03613	0.01511	-0.11722	-0.1226101	-0.12190
ENRLST	ENROLLMENT STATUS	0.20790	0.04322	0.00709	0.10245	0.94035730-01	0.09517
MARST	MARITAL STATUS	0.21739	0.04726	0.00404	0.05337	0.1045477	0.05221
ENTAGE	AGE GROUPINGS---ENTERING AGE	0.21952	0.04775	0.00049	0.00599	0.21303990-01	0.02852
ENG	ENGLISH PLACEMENT	0.21978	0.04830	0.00055	0.08807	0.74970310-02	0.02628
(CONSTANT)						1.344614	

TABLE A-4

Liberal Arts: First-Semester GPA of 2.0 or Above
Characteristics and Survey Responses

SUMMARY TABLE

VARIABLE		MULTIPLE R	R SQUARE	RSQ CHANGE	SIMPLE R	B	BETA
ITEM1Q	AVERAGE GRADE IN HIGH-SCHOOL	0.26943	0.07259	0.07259	0.26943	0.1800279	0.23195
ENRLST	ENROLLMENT STATUS	0.30796	0.09484	0.02225	0.13630	0.1294674	0.13047
MATH	MATH PLACEMENT	0.32502	0.10564	0.01080	0.15119	0.35061550-01	0.11059
ITEM9N1	ATTEND CLASSES	0.33512	0.11231	0.00667	0.12014	0.1009838	0.07502
MARST	MARITAL STATUS	0.34439	0.11860	0.00630	0.07292	0.1642114	0.06637
ITEM9N2	MAKE B AVERAGE	0.34981	0.12237	0.00376	0.13093	0.51724490-01	0.05261
ITEM11N3	WRITING SKILLS	0.35530	0.12624	0.00387	-0.06168	-0.1385638	-0.14942
ITEM11N2	READING SKILLS	0.36285	0.13166	0.00542	0.03740	0.91309970-01	0.10030
ITEM11N1	MATH SKILLS	0.36859	0.13586	0.00420	0.04590	-0.52576810-01	-0.05981
ITEM11N8	STUDY HABITS	0.37282	0.13899	0.00313	0.09419	0.46994870-01	0.05107
ITEM1N2	PREPARE FOR CAREER	0.37626	0.14157	0.00258	0.04242	0.55794410-01	0.04980
ITEM9N3	SATISFIED WITH KCC	0.37857	0.14332	0.00175	0.00187	-0.46598860-01	-0.04932
SEX		0.38072	0.14495	0.00163	-0.09131	-0.43029290-01	-0.04479
ITEM2N6	COLLEGE HAS COURSES	0.38222	0.14613	0.00118	0.06602	0.40758240-01	0.03662
ITEM7	PRESENT EMPLOYMENT	0.38353	0.14710	0.00096	-0.04076	-0.35394710-01	-0.03600
ITEM1N10	SATISFY PARENT'S WISHES	0.38492	0.14816	0.00107	0.02051	0.56423660-01	0.04355
ENG	ENGLISH PLACEMENT	0.38642	0.14932	0.00116	0.08774	0.14269570-01	0.04440
ENTAGE	AGE GROUPINGS---ENTERING AGE	0.38769	0.15030	0.00098	0.05761	0.32706590-01	0.04029
ITEM3	FINANCIAL WORRY	0.38843	0.15088	0.00057	-0.06252	-0.28213620-01	-0.02725
ITEM2N5	CLOSE & CONVENIENT	0.38894	0.15127	0.00039	0.01499	-0.20519380-01	-0.02087
(CONSTANT)						0.4872804	

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VOCATIONAL EDUCATION: SUMMARY TABLES ON REGRESSION ANALYSIS

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TABLE B-1

Vocational Education: Second Semester Enrollment
Characteristics Only

SUMMARY TABLE

VARIABLE		MULTIPLE R	R SQUARE	RSQ CHANGE	SIMPLE R	B	BETA
ENRLST	ENROLLMENT STATUS	0.19205	0.03688	0.03688	0.19205	0.1546215	0.17510
ENTAGE	AGE GROUPINGS---ENTERING AGE	0.22487	0.05057	0.01369	-0.13477	-0.5253690D-01	-0.06176
SEX		0.23201	0.05383	0.00326	-0.08033	-0.5757695D-01	-0.06172
MARST	MARITAL STATUS	0.23802	0.05666	0.00283	-0.29713	-0.1102708	-0.08122
MATH	MATH PLACEMENT	0.24357	0.05933	0.00267	0.07995	0.1469518D-01	0.05226
(CONSTANT)						1.737125	

TABLE B-2

Vocational Education: Second Semester Enrollment
Characteristics and Survey Responses

SUMMARY TABLE

VARIABLE		MULTIPLE R	R SQUARE	RSQ CHANGE	SIMPLE R	B	BETA
ENRLST	ENROLLMENT STATUS	0.17916	0.03210	0.03210	0.17916	0.1460634	0.17714
ENTAGE	AGE GROUPINGS---ENTERING AGE	0.20300	0.04121	0.00911	-0.10583	-0.4221781D-01	-0.06264
ITEM1N10	SATISFY PARENT'S WISHES	0.21211	0.04499	0.00378	-0.04605	-0.9235770D-01	-0.06217
EDOBJ	EDUCATIONAL OBJECTIVE	0.22187	0.04923	0.00424	0.08041	0.7079269D-01	0.07492
ITEM5	CAREER PLANS	0.22918	0.05252	0.00330	-0.04079	-0.1246487	-0.09191
ITEM1N2	PREPARE FOR CAREER	0.23894	0.05709	0.00456	0.07049	0.5947683D-01	0.05583
ITEM11N3	WRITING SKILLS	0.24688	0.06095	0.00386	0.05668	0.4201475D-01	0.05463
ITEM2N6	COLLEGE HAS COURSES	0.25289	0.06355	0.00260	0.06786	0.3540830D-01	0.04272
ITEM2N5	CLOSE & CONVENIENT	0.25550	0.06526	0.00173	-0.02014	-0.4384488D-01	-0.05127
MARST	MARITAL STATUS	0.25718	0.06614	0.00088	-0.03636	-0.7869248D-01	-0.03755
ITEM9N4	GET DEGREE FROM KCC	0.25899	0.06708	0.00094	0.06437	0.2330974D-01	0.02848
ITEM1N1	GET DEGREE-CERTIFICATE	0.26109	0.06817	0.00108	-0.01053	-0.1066369D-01	-0.03615
ITEM3	FINANCIAL WORRY	0.26267	0.06900	0.00083	0.01497	0.2746226D-01	0.03334
ITEM9N3	SATISFIED WITH KCC	0.26375	0.06956	0.00057	0.04246	0.2460133D-01	0.02961
SEX		0.26459	0.07001	0.00044	-0.05464	-0.2000366D-01	-0.02257
ITEM9N2	MAKE B AVERAGE	0.26513	0.07030	0.00029	0.05180	0.1972090D-01	0.02408
ITEM11N8	STUDY HABITS	0.26596	0.07074	0.00034	0.02282	-0.1750611D-01	-0.02252
ITEM10	AVERAGE GRADE IN HIGH-SCHOOL	0.26636	0.07100	0.00026	0.06199	0.1231117D-01	0.01949
ITEM7	PRESENT EMPLOYMENT	0.26693	0.07125	0.00025	0.00910	0.1378033D-01	0.01668
ENG	ENGLISH PLACEMENT	0.26711	0.07135	0.00010	0.05975	0.2740093D-02	0.02046
MATH	MATH PLACEMENT	0.26751	0.07156	0.00021	0.03910	-0.5965420D-02	-0.02199
ITEM9N1	ATTEND CLASSES	0.26769	0.07166	0.00010	0.03156	-0.1289133D-01	-0.01075
ITEM11N1	MATH SKILLS	0.26780	0.07172	0.00006	-0.00408	0.6706335D-02	0.00916
(CONSTANT)						1.647434	

Table B-3 -- Vocational Education: First-Semester GPA of 2.0 or Above Characteristics Only

SUMMARY TABLE

Variable		MULTIPLE R	R SQUARE	RSQ CHANGE	SIMPLE R	B	BETA
MATH	MATH PLACEMENT	0.16974	0.02881	0.02881	0.16974	0.4503581D-01	0.14323
ENRLST	ENROLLMENT STATUS	0.20780	0.04318	0.01437	0.13971	0.1247796	0.12637
ENTAGE	AGE GROUPINGS -- ENTERING AGE	0.21535	0.04638	0.00319	0.03126	0.4359507D-01	0.05845
ENG	ENGLISH PLACEMENT	0.21653	0.04689	0.00051	0.10362	0.7980208D-02	0.02743
SEX		0.21756	0.04733	0.00045	0.02241	0.2226545D-01	0.02135
EDOBJ	EDUCATIONAL OBJECTIVE	0.21777	0.04742	0.00009	0.03186	0.1065978D-01	0.00970
(CONSTANT)						1.171691	

Table B-4 Vocational Education: First-Semester GPA of 2.0 or Above Characteristics and Survey Responses

VARIABLE		MULTIPLE R	R SQUARE	RSQ CHANGE	SIMPLE R	B	BETA
MATH	MATH PLACEMENT	0.21201	0.04495	0.04495	0.21201	0.4271732D-01	0.13436
ITEM10	AVERAGE GRADE IN HIGH SCHOOL	0.23889	0.05707	0.01212	0.15500	0.8453016D-01	0.11420
ITEM1N1	GET DEGREE-CERTIFICATE	0.25964	0.06741	0.01035	-0.09367	-0.1022096	-0.10282
ENRLST	ENROLLMENT STATUS	0.28161	0.07930	0.01189	0.15484	0.1124373	0.11636
ITEM7	PRESENT EMPLOYMENT	0.29817	0.08891	0.00960	0.09614	0.6738401D-01	0.06960
ENG	ENGLISH PLACEMENT	0.31135	0.09694	0.00803	0.17661	0.2474390D-01	0.07672
ITEM9N4	GET DEGREE FROM KCC	0.31855	0.10148	0.00450	-0.07156	-0.8044907D-01	-0.08386
ITEM11N3	WRITING SKILLS	0.32369	0.10478	0.00334	-0.01379	-0.1559942	-0.17308
ITEM11N2	READING SKILLS	0.34091	0.11622	0.01145	0.09405	0.1672066	0.18950
ITEM1N2	PREPARE FOR CAREER	0.34705	0.12044	0.00422	0.04495	0.9808831D-01	0.07856
SEX		0.35374	0.12513	0.00469	0.04816	0.8431003D-01	0.08119
ITEM1N10	SATISFY PARENTS' WISHES	0.36017	0.12973	0.00459	-0.08245	-0.9725040D-01	-0.07313
ITEM11N1	MATH SKILLS	0.36338	0.13204	0.00232	0.05394	-0.4470724D-01	-0.05212
ITEM2N6	COLLEGE HAS COURSES	0.36478	0.13306	0.00102	0.04214	0.3603003D-01	0.03709
ITEM9N2	MAKE B AVERAGE	0.36612	0.13404	0.00098	0.01226	-0.2955067D-01	-0.03079
MARST	MARITAL STATUS	0.36725	0.13487	0.00083	0.05367	0.7382593D-01	0.03006
ITEM2N5	CLOSE AND CONVENIENT	0.36771	0.13521	0.00034	-0.01737	0.1607707D-01	0.01604
ITEM3	FINANCIAL WORRY	0.36807	0.13548	0.00027	0.04018	0.1643995D-01	0.01763
ITEM11N8	STUDY HABITS	0.36847	0.13577	0.00029	-0.00610	-0.1659667D-01	-0.01843
ITEM9N1	ATTEND CLASSES	0.36869	0.13593	0.00016	0.02979	0.2305189D-01	0.01638
EDOBJ	EDUCATIONAL OBJECTIVE	0.36888	0.13607	0.00015	0.04020	-0.1377899D-01	-0.01279
ITEM9N3	SATISIFIED WITH KCC	0.36897	0.13614	0.00006	-0.05859	-0.9099711D-02	-0.00934
(CONSTANT)						1.017725	

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